

L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1993:444515 CAPLUS  
DN 119:44515  
ED Entered STN: 07 Aug 1993  
TI **Mediated** micro-glucose sensors using 2  $\mu$ m **platinum**  
electrodes  
AU **Yokoyama, Kenji**; Nakajima, Kenji; Uchiyama, Shunichi; Suzuki,  
Shuichi; Suzuki, Masayasu; Takeuchi, Toshifumi; Tamiya, Eiichi; Karube,  
Isao  
CS Res. Cent. Adv. Sci. Technol., Univ. Tokyo, Tokyo, Japan  
SO Electroanalysis (1992), 4(9), 859-64  
CODEN: ELANEU; ISSN: 1040-0397  
DT Journal  
LA English  
CC 9-7 (Biochemical Methods)  
AB Glucose oxidase (GOD) and glucose dehydrogenase (GDH)-immobilized  
cylindrical microelectrodes were fabricated, and their characteristics  
were evaluated by using 1,4-benzoquinone and ferricyanide as electron  
mediators, resp. Each enzyme was immobilized in a photocrosslinkable  
polymer on a cylindrical microelectrode of 2- $\mu$ m diameter. A linear range  
in the calibration plot of the GOD-based microglucose sensor was observed to  
be wider than that obtained using a disk electrode of 1-mm diameter. The  
mediated response of the 2- $\mu$ m glucose sensor was compared with the  
response resulting from hydrogen peroxide detection. This result showed  
that a higher response and a wider linear range were observed at a highly  
concentrated mediator. For the GDH-immobilized 2- $\mu$ m microelectrode, a much  
higher response was obtained when not only ferricyanide but also  
diaphorase were employed to reoxidize NADH produced by the enzyme reaction  
of GDH. The GDH-based microglucose sensor was unaffected by dissolved  
oxygen concentration

L1 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1990:627561 CAPLUS  
DN 113:227561  
ED Entered STN: 22 Dec 1990  
TI Biosensor for microanalysis of body fluids  
IN Kawaguri, Mariko; Fujita, Mayumi; Nankai, Shiro; Iijima, Takashi  
PA Matsushita Electric Industrial Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF

DT Patent  
LA Japanese  
IC ICM G01N027-327  
ICS G01N027-416  
CC 9-7 (Biochemical Methods)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02102448	A2	19900416	JP 1988-255161	19881011 <--
	JP 06052248	B4	19940706		
PRAT	JP 1988-255161		19881011		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 02102448	ICM	G01N027-327
	ICS	G01N027-416

AB A biosensor for microdetn. of, e.g., glucose in body fluids consists of a pair of a measuring electrode and an opposite electrode on an insulating C plate. The surface of the electrode system is coated with a layer containing redox enzymes, hydrophilic polymer, and electron acceptors. A heat-generating substance (e.g. MgCl<sub>2</sub> that generates heat when dissolved in an aqueous solution) is attached to the enzyme layer. The heat generated decreases the effect of temperature on the anal. Diagrammatic views of the biosensor are presented.

	Type	L #	Hits	Search Text	DBs	Time Stamp
1	BRS	L3	13211	(amperom\$ or current or electrochemical or electroanalytical or ampermo\$) and diffusion	EPO; JPO; DERWEN T	2004/08/17 15:30
2	BRS	L4	165	(amperom\$ or current or electrochemical or electroanalytical or ampermo\$) and (diffusion near2 coefficient)	EPO; JPO; DERWEN T	2004/08/17 15:35
3	BRS	L5	117	(amperom\$ or current or electrochemical or electroanalytical or ampermo\$) and (heat\$ or temp\$) and (biosensor or (sensor and (reagent or enzyme or oxidase or oxidoreductase or dehydrogenase) ))	EPO; JPO; DERWEN T	2004/08/17 16:00
4	BRS	L6	117	5 not 4	EPO; JPO; DERWEN T	2004/08/17 15:37